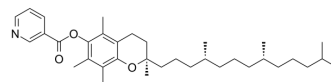


## (±)-α-Tocopherol nicotinate

<b>Cat. No.:</b>	HY-B0757A		
<b>CAS No.:</b>	51898-34-1		
<b>Molecular Formula:</b>	C <sub>35</sub> H <sub>53</sub> NO <sub>3</sub>		
<b>Molecular Weight:</b>	535.8		
<b>Target:</b>	Reactive Oxygen Species; Endogenous Metabolite		
<b>Pathway:</b>	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 10 mg/mL (18.66 mM; ultrasonic and warming and heat to 60°C)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	1.8664 mL	9.3318 mL	18.6637 mL
		5 mM	0.3733 mL	1.8664 mL	3.7327 mL
10 mM		0.1866 mL	0.9332 mL	1.8664 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 1 mg/mL (1.87 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: 1 mg/mL (1.87 mM); Suspended solution; Need ultrasonic</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 1 mg/mL (1.87 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	(±)-α-Tocopherol nicotinate, vitamin E - nicotinate, is an orally active fat-soluble antioxidant that prevents lipid peroxidation in cell membranes. (±)-α-Tocopherol nicotinate is hydrolysed in the blood to α-tocopherol and niacin and may be used in studies of related vascular diseases <sup>[1][2]</sup> .
<b>In Vitro</b>	(±)-α-Tocopherol nicotinate can help slow the progression of microangiopathy in type 2 diabetics by reducing lipid peroxidation stress in the red blood cell membrane, improving blood rheology and red blood cell deformability <sup>[1]</sup> . (±)-α-Tocopherol nicotinate (Vitamin E) (2 µg/mL, 24 h) increases the proportion of CD4+CD8-T cells in thymocytes by

---

	pretreating the thymic epithelial cell line IT45-R1 and then incubating it with immature T cells <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	(±)- $\alpha$ -Tocopherol nicotinate (Vitamin E) (in animal feedings, 50 mg/kg or 585 mg/kg, 7 weeks) significantly increases the proportion of CD4+CD8- T cells and the expression of ICAM-1 in thymic epithelial cells (TECs) isolated of male Fisher rats at high dose concentrations of 585 mg/kg compared to low dose treatment of 50 mg/kg <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

---

## REFERENCES

---

[1]. T W Chung, et al. Reducing lipid peroxidation stress of erythrocyte membrane by alpha-tocopherol nicotinate plays an important role in improving blood rheological properties in type 2 diabetic patients with retinopathy. Diabet Med. 1998 May;15(5):380-5.

[2]. Satoru Moriguchi, et al. Vitamin E enhances T cell differentiation through increased epithelial cell function in rat thymus, Nutrition Research, Volume 17, Issue 5, 1997, Pages 873-883.

---

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA